Applicant: Alison M. Jones et al.

Serial No.: To Be Assigned

Attorney's Docket No.: 18780008US1 / CGL03/0260WO01

Filed: January 24, 2006

Page : 3 of 10

Amendments to the Claims:

Please cancel claims 1-26 without prejudice to continued prosecution. Please add new claims 27-75. The claims and their status are shown below.

1-26. (Canceled)

27. (New) A method of making a feed additive or a feedstock comprising:

providing corn steep-water having a solids content of from about 8% to about 50% on a dry weight basis;

fermenting the steep-water in the presence of at least one microbe to generate fermented steep-water,

drying the fermented steep-water to generate an enhanced steep-water having a solids content of from about 30% to about 90% on a dry weight basis, thereby making said feed additive or said feedstock.

- 28. (New) The method of claim 27 wherein the corn steep-water is a low phosphorous steep-water.
- 29. (New) The method of claim 28 wherein the low phosphorous steep-water is a low phytate steep-water.
- 30. (New) The method of claim 27 wherein the at least one microbe is endogenous to the steep-water.
- 31. (New) The method of claim 27 wherein the at least one microbe is exogenous to the steep-water.
- 32. (New) The method of claim 27, wherein said at least one microbe is an organic acidproducing microbe, wherein said fermenting is under conditions that increase organic acid content at least about 10% on a dry weight basis.
- 33. (New) The method of claim 32, wherein said organic acid-producing microbe is selected from the group consisting of a lactic acid-producing microbe, a propionic acid-producing microbe, a citric acid-producing microbe, a fumaric acid-producing microbe, a succinic acid-producing microbe, a formic acid-producing microbe, a benzoic acid-producing microbe, and an acetic acid-producing microbe.
- 34. (New) The method of claim 33 wherein said organic acid-producing microbe is selected from the group consisting of *Lactobacillus* spp., *Lactococcus* spp., *Leuconostoc* spp.,

Applicant: Alison M. Jones et al.

Serial No.: To Be Assigned

Attomey's Docket No.: 18780-008US1 / CGL03/0260WO01

Filed : January 24, 2006 Page : 4 of 10

Bacillus coagulans, Propionibacterium acidipropionici, Propionibacterium freudenreichii, Propionibacterium shermanii, Propionibacterium jensenii, and Propionibacterium thoenii.

- 35. (New) The method of claim 32 wherein said fermenting is performed at a temperature of from about 36°C to about 55°C under anaerobic conditions.
- 36. (New) The method of claim 35 wherein the fermenting is performed at a pH of from about 4.5 to about 6.0.
- 37. (New) The method of claim 32 wherein the fermented or enhanced steep-water comprises a lactate concentration of at least about 180 g lactate per Kg of steep-water solids.
- 38. (New) The method of claim 27 wherein said at least one microbe is a direct-fed microbial (DFM), wherein said fermenting is under conditions that increase the numbers of said DFM.
- 39. (New) The method of claim 38 wherein said DFM is selected from the group consisting of Lactobacillus plantrum, Lactobacillus casei, Lactobacillus acidophilus, Enterococcus faecium, Bifidobacterium bifidium, Bifidobacterium thermophilum, Bifidobacterium longum, Bacillus subtillis, Saccharomyces cerevisiae, Aspergillus oryzae and mixtures thereof.
- 40. (New) The method of claim 38, wherein said fermenting is performed at a temperature of at least 25°C for at least about 10 hours.
- 41. (New) The method of claim 27 wherein said fermenting is under conditions that induce said at least one microbe to produce or increase production of one or more enzymes.
- 42. (New) The method of claim 41 wherein said at least one microbe is selected from the group consisting of *Bacillus amyloliquefaciens*, *Bacillus licheniformis*, *Bacillus subtilis*, *Aspergillus niger*, *Aspergillus oryzae*, *Bacillus lentus*, *Bacillus stearothermophilus*, *Humicola insolens*, *Trichoderma longibranchiatum*, *Aspergillus niveus* and mixtures thereof.
- 43. (New) The method of claim 41 wherein the fermenting is performed at a temperature of at least about 28°C for about 24 hours to about 72 hours.
- 44. (New) The method of claim 41 wherein the enzyme is selected from the group consisting of a protease, a xylane, an amylase, and a phytase.

Applicant: Alison M. Jones et al.

Serial No.: To Be Assigned

Attorney's Docket No.: 18780008US1 / CGL03/0260WO01

Filed : January 24, 2006 Page : 5 of 10

45. (New) The method of claim 27 wherein said microbe is yeast, wherein said fermenting is under conditions that generate a enhanced steep-water having at least about 70% yeast on a dry weight basis.

- 46. (New) The method of claim 45 wherein said yeast is selected from the group consisting of *Saccharomyces cerevisiae*, *Candida utilis*, *Kluyveromyces marxianus*, and *Torulaspora delbrueckii*.
- 47. (New) The method of claim 45 wherein the fermenting is performed at a temperature of from about 25°C to about 45°C under aerobic conditions.
- 48. (New) The method of claim 45 wherein the fermenting is performed at a temperature of at least about 28°C for at least about 24 hours.
- 49. (New) The method of claim 45 wherein the fermented steep-water comprises at least 7 g acetate per L of fermented steep-water.
- 50. (New) The method of claim 45 wherein the fermented or enhanced steep-water comprises at least about 1 µg biotin per g of steep-water solids.
- 51. (New) The method of claim 45 further comprising lysing, at least partially, said at least one yeast in the fermented or enhanced steep-water to generate a yeast extract.
- 52. (New) The method of claim 51 wherein said lysing comprises incubating the fermented or enhanced steep-water at a pH of from about 4.7 to about 5.2 and a temperature of from about 42°C to about 48°C.
- 53. (New) The method of claim 51 wherein at least some of said lysing is autolysing by said at least one yeast.
- 54. (New) The method of claim 53 wherein the autolysing is performed under aerobic conditions at a pH of about 5.0 and a temperature of about 45°C.
 - 55. (New) A yeast extract made by the method of claim 51.
- 56. (New) The method of claim 27 wherein said fermenting is under conditions that induce said at least one microbe to produce or increase production of one or more vitamins.
- 57. (New) The method of claim 56 wherein said microbe is selected from the group consisting of *Propionibacterium shermannii*, *Ashbya gossypii*, *Eremothecium ashbyii*, *Bacillus* spp., *Gluconobacter oxidans* subsp. *suboxidans*, *Serratia marcescens*, *Pseudomonas denitrificans*, *Mortierella alpine* and combinations thereof.

Applicant: Alison M. Jones et al.

Serial No.: To Be Assigned

Attorney's Docket No.: 18780-008US1 / CGL03/0260WO01

Filed: January 24, 2006 Page: 6 of 10

58. (New) The method of claim 56 wherein said vitamin is B₁₂, riboflavin, arachidonic acid, linolenic acid, vitamin C, biotin, mead acid, pantothenate, or thiamine.

- 59. (New) The method of claim 56 wherein said fermenting is performed at a temperature of at least about 20°C for at least about 10 hours.
- 60. (New) The method of claim 56 wherein said fermented or enhanced steep-water comprises an increase of at least about 400 µg vitamin/Kg steep-water solids.
- 61. (New) The method of claim 27 wherein said fermentation is under conditions that induce said at least one microbe to produce or increase production of free amino nitrogen (FAN) or one or more amino-acids.
- 62. (New) The method of claim 61 wherein said microbe is selected from the group consisting of Bacullus subtilis, Bacillus amyloliquefaciens, Aspergillus niger, Aspergillus oryzae, Corynebacterium glutamicum, Corynebacterium acetoacidophilum, Brevibacterium lactofermentum, Brevibacterium flavum, Brevibacterium divaricatum, and Corynebacterium lilium.
 - 63. (New) The method of claim 61 wherein said amino acid is lysine or methionine.
- 64. (New) The method of claim 61 wherein said fermenting is performed at a temperature of at least about 28°C for about 24 to about 72 hours.
- 65. (New) The method of claim 61 wherein said fermented or enhanced steep-water comprises at least about 5 g FAN per Kg steep-water solids.
- 66. (New) The method of claim 61 wherein said fermenting is performed at a temperature of at least about 30°C for at least about 48 hours.
- 67. (New) The method of claim 63 wherein said fermented or enhanced steep-water comprises at least about 20 g lysine or 4 g methionine per Kg steep-water solids.
- 68. (New) The method of claim 27 wherein the enhanced steep-water has a solids content of from about 40% to about 80% on a dry weight basis.
- 69. (New) The method of claim 27 wherein the enhanced steep-water has a solids content of from about 50% to about 70% on a dry weight basis.
- 70. (New) The method of claim 27 wherein the enhanced steep-water has a solids content of from about 60% to about 75% on a dry weight basis.

Applicant: Alison M. Jones et al. Attorney's Docket No.: 18780-Serial No.: To Be Assigned 008US1 / CGL03/0260WO01

Filed : January 24, 2006 Page : 7 of 10

71. (New) The method of claim 27 further comprising removing, at least partially, the at least one microbe from the fermented or enhanced steep-water.

- 72. (New) The method of claim 71 further comprising mixing the removed at least one microbe with the feed additive or feedstock.
- 73. (New) The method of claim 27 further comprising mixing the feed additive or feedstock with a feedstuff to generate an animal feed having a moisture content of at least about 12% by weight.
 - 74. (New) A feed additive or feedstock produced by the method of claim 27.
- 75. (New) An animal feed comprising a feed additive or feedstock produced by the method of claim 27.